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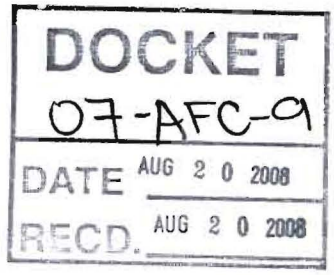

August 20, 2008

Ms. Angela Hockaday
California Energy Commission
Docket Unit
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: **SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY'S SECOND SET OF DATA RESPONSES**
DOCKET NO. 07-AFC-9

Dear Ms. Hockaday:

Enclosed for filing with the California Energy Commission are one (1) original and nineteen (19) copies of **SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY'S SECOND SET OF DATA RESPONSES**, for the Canyon Power Plant Project (07-AFC-9).

Sincerely,

Marguerite Cosens

Marguerite Cosens

Second Data Responses
CANYON POWER PLANT

submitted to:

California Energy Commission

submitted by:

Southern California Public Power Authority

with support from:

URS Corporation

August 2008

Technical Area: Air Quality

Data Request AIR-1: When will revised modeling be complete and available?

Response: The revised modeling is attached.

City of Anaheim
PUBLIC UTILITIES DEPARTMENT

July 3, 2008

Vicky Lee
Air Quality Engineer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

Subject: July 2008 Revised Air Quality Dispersion Modeling and Health Risk Assessment Modeling

Dear Ms. Lee:

The City of Anaheim is submitting the following information:

1. July 2008 Revised Air Quality Dispersion Modeling and Health Risk Assessment Modeling. A summary describing the basis for the Revised Air Quality Modeling and Health Risk Assessment and the model input and output data is included for your review along with a compact disk containing electronic model input and output files for all of the revised model simulations.
2. Three figures showing the site area and CPP plant layout.
3. A separate letter from the City of Anaheim to demonstrate compliance with SCAQMD's Rule 1303 and 1309.1.
4. Information regarding Performance Guarantees and a scope of work for the Continuous Emissions Monitoring System and the Emissions Control Module.

Additionally, SCAQMD requested information regarding natural gas consumption rates for our gas turbines. Based on the turbine performance sheets provided to us by PB Power, the highest full-load fuel consumption rate per turbine over the expected range of ambient temperatures is 433.6 MMBtu/hour (LHV). If we divide this rate by the estimated natural gas energy content of 913 Btu/scf (LHV), we arrive at a gas consumption rate of 0.475 MMCF/hour/turbine.

It is also understood that a PM trap will be required for the diesel blackstart generator.

If you have any questions or would like to discuss, I can be reached at 714-765-4112.

Sincerely,

Suzanne Wilson
City of Anaheim Public Utilities Department

201 S. Anaheim Boulevard, Suite 1101
Anaheim, California 92805
TEL (714) 765-5137
www.anaheim.net

Basis for Revised Air Quality Dispersion Modeling and Health Risk Assessment Modeling July 1, 2008

Dispersion and health risk assessment modeling presented in the Permit to Construct/Permit to Operate application for the Canyon Power Plant has been redone to incorporate a number of changes to the project operating profile that have been requested by the applicant, as well as modifications made in response to SCAQMD comments. The attached tables in the accompanying Word file (MODEL INPUT & OUTPUT DATA.doc) present the input emissions data for and the results of dispersion and health risk modeling simulations in the format that SCAQMD has requested. The project changes that are reflected in these model inputs and results compared with the analyses initially presented in the PTC/PTO application are summarized below.

1. An increase in the requested limit on turbine startup time from 20 to 35 minutes, based on a new table showing minute-by-minute emissions over the extended startup period (Table 1).
2. An increase in the requested limit on turbine shutdown time from 8 to 10 minutes, based on a new table showing minute-by-minute emissions over the extended shutdown period (Table 2).
3. An increase in the maximum hourly turbine startup emissions to accommodate:
   - a full startup sequence of 35 minutes, followed immediately by a turbine trip,
   - a five minute purge period during which no fuel is burned, and
   - the first 20 minutes of a restart sequence.

   The applicant understands that maximum hourly mass emissions of NO_x from the gas turbines will be regulated by a permit condition. Since the startup emissions data provided by the turbine vendor represent ideal operating conditions, the applicant has requested, and AQMD has approved a 30% higher maximum hourly emission rate than was originally proposed. The applicant requests that the new value of 14.27 pounds per hour per turbine be used as the basis for any permit limit on hourly NO_x emissions. The modeling results provided demonstrate that the project will comply with the California 1-hour NO_2 standard of 339 micrograms per cubic meter if emissions actually reach this level.

4. Use of a conservative maximum natural gas sulfur content of 1.0 grains per 100 standard cubic feet (gr/100 scf) for all model simulations to evaluate SO_2 impacts of 1 to 24 hours, including turbine startup conditions. The expected actual maximum gas sulfur content of 0.25 gr/100 scf continues to be used for estimating annual SO_2 emissions and impacts.

5. Increase in the hours of operation (including emergency operation) for the diesel internal combustion engine for the blackstart generator to 200 hours per year. Per SCAQMD guidance, the NO_x emission rate for this engine has been

changed to 4.8 g/bhp-hr, or 12.06 lbs/hr to be consistent with RECLAIM rules for calculating the required number of RTCs. The revised dispersion modeling which is done for CEQA compliance used the emissions rate provided by the vendor of 4.08 g/bhp-hr or 10.27 lb/hr. As a result, this engine may be tested at this emission rate for up to 38 minutes in any hour without causing an exceedance of the California one-hour NO_2 standard. If necessary, the applicant will accept a condition limiting the duration of maintenance tests for this engine to 38 minutes per test.

6. The health risk assessment (HRA) modeling based on the AERMOD and HARP models was redone for two reasons:
   - Annual turbine emissions of all toxic organic compounds, which serve as the basis for estimating chronic and carcinogenic health risks, have been increased to reflect the increase in total operating hours due to the increased startup and shutdown durations described in Items 1 and 2 above. The total operating time per turbine assumed in the new HRA, including 129 startup/shutdown cycles, was increased to 1,098.25 hours per year
   - Version 1.3 of the HARP model was recently replaced by Version 1.4, which incorporates revised health risk parameters for several TACs.

Meteorological input data and assumed background air quality levels used in the revised air quality and health risk modeling are the same as described in the PTC/PTO application. A compact disk containing electronic model input and output files for all of the revised model simulations is being provided to SCAQMD with this document

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Table 1
Revised 72-Minute Sequence of Normal Startup and Emission Control with Turbine Trip and Restart

			Stack emissions per Turbine											
Time	CT	SCR	NOx		CO		ROG		PM10		SOx @ 0.25 gr		SOx @ 1 gr	
(min)	Δ time	Δ time	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1		18.00	0.30	22.00	0.37	2.50	0.04	0.63	0.01	0.07	0.00	0.28	0.00
2			18.00	0.60	22.00	0.73	2.50	0.08	0.63	0.02	0.07	0.00	0.28	0.01
4			18.00	1.20	22.00	1.47	2.50	0.17	0.63	0.04	0.07	0.00	0.28	0.02
6	5		18.00	1.80	10.24	1.81	2.25	0.24	0.63	0.06	0.07	0.01	0.28	0.03
8	2		18.00	2.40	10.24	2.15	2.25	0.32	0.63	0.08	0.07	0.01	0.28	0.04
10			50.00	4.07	4.66	2.30	0.36	0.33	1.16	0.12	0.13	0.01	0.51	0.05
12		12	26.00	4.93	6.98	2.54	0.90	0.36	1.69	0.18	0.19	0.02	0.74	0.08
14			33.00	6.03	4.69	2.69	0.90	0.39	2.22	0.25	0.24	0.03	0.97	0.11
15		3	38.00	6.67	5.36	2.78	0.90	0.40	2.48	0.29	0.27	0.03	1.09	0.13
16			15.49	6.92	5.70	2.88	0.99	0.42	2.75	0.34	0.30	0.04	1.20	0.15
17	9		16.63	7.20	6.37	2.98	1.13	0.44	3.01	0.39	0.33	0.04	1.32	0.17
18			15.93	7.47	6.37	3.09	1.17	0.46	3.01	0.44	0.33	0.05	1.32	0.19
20			14.52	7.95	6.37	3.30	1.17	0.50	3.01	0.54	0.33	0.06	1.32	0.24
22			13.11	8.39	6.37	3.51	1.17	0.54	3.01	0.64	0.33	0.07	1.32	0.28
24			11.71	8.78	6.37	3.73	1.17	0.58	3.01	0.74	0.33	0.08	1.32	0.33
26			10.30	9.12	6.37	3.94	1.17	0.61	3.01	0.84	0.33	0.09	1.32	0.37
28			8.90	9.42	6.37	4.15	1.17	0.65	3.01	0.94	0.33	0.10	1.32	0.41
30			7.49	9.67	6.37	4.36	1.17	0.69	3.01	1.04	0.33	0.11	1.32	0.46
32			6.09	9.87	6.37	4.58	1.17	0.73	3.01	1.14	0.33	0.13	1.32	0.50
34			4.68	10.03	6.37	4.79	1.17	0.77	3.01	1.24	0.33	0.14	1.32	0.55
35		18	3.98	10.09	6.37	4.89	1.17	0.79	3.01	1.29	0.33	0.14	1.32	0.57
35			0.00	10.09	0.00	4.89	0.00	0.79	0.00	1.29	0.00	0.14	0.00	0.57
36			0.00	10.09	0.00	4.89	0.00	0.79	0.00	1.29	0.00	0.14	0.00	0.57
38			0.00	10.09	0.00	4.89	0.00	0.79	0.00	1.29	0.00	0.14	0.00	0.57
40	5		0.00	10.09	0.00	4.89	0.00	0.79	0.00	1.29	0.00	0.14	0.00	0.57

			Stack emissions per Turbine											
Time	CT	SCR	NOx		CO		ROG		PM10		SOx @ 0.25 gr		SOx @ 1 gr	
(min)	Δ time	Δ time	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total
40	0		0.00	10.09	0.00	4.89	0.00	0.79	0.00	1.29	0.00	0.14	0.00	0.57
41	1	0	18.00	10.39	22.00	5.26	2.50	0.83	0.63	1.30	0.07	0.14	0.28	0.57
42			18.00	10.69	10.24	5.43	2.33	0.87	0.63	1.31	0.07	0.14	0.28	0.58
43		2	6.80	10.81	11.76	5.63	2.33	0.91	0.63	1.32	0.07	0.15	0.28	0.58
44			6.80	10.92	11.76	5.82	2.33	0.95	0.63	1.34	0.07	0.15	0.28	0.59
46	5		6.80	11.15	11.76	6.21	2.33	1.03	0.63	1.36	0.07	0.15	0.28	0.60
48	2		6.80	11.37	11.76	6.61	2.33	1.10	0.63	1.38	0.07	0.15	0.28	0.60
50			18.90	12.00	3.35	6.72	0.45	1.12	1.16	1.42	0.13	0.16	0.51	0.62
52			9.83	12.33	5.03	6.89	0.90	1.15	1.69	1.47	0.19	0.16	0.74	0.65
54			12.47	12.75	4.69	7.04	0.90	1.18	2.22	1.55	0.24	0.17	0.97	0.68
56			15.49	13.26	5.70	7.23	0.99	1.21	2.75	1.64	0.30	0.18	1.20	0.72
57	9		16.63	13.54	6.37	7.34	1.13	1.23	3.01	1.69	0.33	0.19	1.32	0.74
58			15.78	13.80	6.37	7.44	1.17	1.25	3.01	1.74	0.33	0.19	1.32	0.76
60			14.10	14.27	6.37	7.66	1.17	1.29	3.01	1.84	0.33	0.20	1.32	0.81
72		15	3.98	15.07	6.365	8.9294	1.17	1.522083	3.01	2.440019	0.330261	0.267722	1.321045	1.070888

Table 2
Revised Turbine Shutdown Sequence Emissions for 10-Minute Shutdown Event Showing SOx Emissions for Worst Case and Expected Natural Gas Fuel Sulfur Contents

			Stack emissions per turbine											
Time	CT	SCR	NOx		CO		ROG		PM10		SOx @ .25gr		SOx @ 1gr	
(min)	Δ time	Δ time	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# tot
0	0	0	3.98	0.00	6.37	0.00	1.17	0.00	3.01	0.00	0.33	0.00	1.32	0.0
1	1		6.53	0.11	4.36	0.07	0.99	0.02	2.52	0.04	0.28	0.00	1.11	0.0
2	2		5.26	0.20	5.03	0.16	0.81	0.03	2.03	0.08	0.22	0.01	0.89	0.0
3	3		4.17	0.27	3.69	0.22	0.63	0.04	1.58	0.10	0.17	0.01	0.69	0.0
4	4		2.90	0.31	2.38	0.26	0.45	0.05	1.14	0.12	0.13	0.01	0.50	0.0
5	5		6.35	0.42	4.69	0.34	2.25	0.09	0.63	0.13	0.07	0.01	0.28	0.0
6	6		3.27	0.47	7.37	0.46	2.25	0.12	0.63	0.14	0.07	0.02	0.28	0.0
7	7		3.27	0.53	7.37	0.58	2.25	0.16	0.63	0.15	0.07	0.02	0.28	0.0
8	8		3.27	0.58	7.37	0.70	2.25	0.20	0.63	0.16	0.07	0.02	0.28	0.0
9	9		3.27	0.64	7.37	0.83	2.25	0.24	0.63	0.17	0.07	0.02	0.28	0.1
10	10		3.27	0.69	7.37	0.95	2.25	0.27	0.63	0.18	0.07	0.02	0.28	0.1
10	10		3.27	0.69	7.37	0.95	2.25	0.27	0.63	0.18	0.07	0.02	0.28	0.1

Note: During the shutdown sequence the SCR is operating over the full shutdown time at the transient removal efficiency. NOx removal rates reflect this transitory operational mode and, therefore, the SCR Δtime remains unchanged throughout the shutdown.

Modeled Emission Rates/Stack Parameters during Normal Operation (Data for Individual Turbine)

Parameter	Individual Turbine
Stack Diameter, ft	11.7
Stack Height, ft	86
Stack Temp, deg F	838.67
Exhaust Flow, acfm	590,179
Stack Velocity, ft/s	91.96

Pollutant	Averaging	Per-Turbine Emissions (g/s)	Notes
NO_x	1-hour	0.501 (3.98 lb/hour)	No startup
	Annual	0.0773	Non-commissioning year
CO	1-hour	0.801	No startup
	8-hour	0.820	
SO_x	1-hour	0.171	No startup; 1.0 gr/100 SCF fuel sulfur content
	3-hour	0.171	1.0 gr/100 SCF fuel sulfur content
	24-hour	0.171	1.0 gr/100 SCF fuel sulfur content
	Annual	0.008	Non-commissioning year; 0.25 gr/100 SCF fuel sulfur content for normal operations
PM_{10}	24-hour	0.383	
	Annual	0.046	Non-commissioning year

1 hour all pollutants: Based on maximum normal full load operation,

8-hour CO: Modeling for this pollutant and averaging time will be based on full 1.2 hour start/purge/restart scenario followed by (see startup emission table at end of this document), and then 6.8 hours of normal full-load operation. This results in a maximum 8-hour average emission rate, i.e., higher than with more of the period filled with normal full-load operations.

3-hour SO_2: Based on full load normal operation for three hours and natural gas fuel sulfur content of 1.0 gr/100 SCF

24-hour SO_2 and PM_{10} Based on maximum full load normal operation and natural gas fuel sulfur content of 1.0 gr/100 SCF

Annual all pollutants: Based on 129 35-minute startups, 129 10-minute shutdowns and 1001.5 hours of max full load operation. Did not use trip/restart scenario for startups because 129 cycles is sufficient to cover the Maximum expected number of such events. Natural gas sulfur content of 0.25 gr/100 SCF used for normal operations for annual emission calculation.

Modeled Emission Rates/Stack Parameters During Startup (Data for Individual Turbine)

Parameter	Turbine
Stack Diameter, ft	11.7
Stack Height, ft	86
Stack Temp, deg F	783
Exhaust Flow, acfm	505,554
Stack Velocity, ft/s	78.37

Data from table of minute by minute startup data

Pollutant	Averaging Time	Per-Turbine Emissions (g/s)	Note
NO_x	1-hour	1.798 (14.27 lb/hr)	Includes 35-minute startup, turbine trip, 5 minute purge and first 20 minutes of restart

CO	1-hour	0.965 (7.66 lb/hour)	Includes 35-minute startup, turbine trip, 5 minute purge and first 20 minutes of restart
	8-hour	0.820 (6.51 lb/hour)	See normal 8 hour CO scenario above

1-hour NO_x and CO: Based on full startup (35 minutes) followed by 5-minute purge and then first 20 minutes of restart. Note that the 1-hour NO_x emission rate in this table is the peak hourly emission rate among all turbine operating scenarios and the applicant requests that this be the basis for any permit condition limiting hourly NO_x emissions.

Modeled Emission Rates/Stack Parameters During Commissioning (Data for Individual Turbine)

Parameter	Turbine - Base Load Test	Turbine - First Fire Test
Stack Diameter, ft	11.7	11.7
Stack Height, ft	86	86
Stack Temp, deg F	843	694
Exhaust Flow, acfm	580,274	199,268
Stack Velocity, ft/s	90.42	31.05

Pollutant	Averaging Time	Turbine - Base Load Test	Turbine - First Fire Test
		Emissions (g/s)	Emissions (g/s)
NO_x	1-hour	5.371	1.047 (Did model despite lower emission rate because much lower stack exhaust velocity)
CO	1-hour	2.146 (Not modeled because clearly not worst case)	4.315
	8-hour	2.146 (Not modeled because clearly not worst case)	4.315

Modeled Emission Rates/Stack Parameters for HRA (Data for Individual Turbine)

Parameter	Turbine
Stack Diameter, ft	11.7
Stack Height, ft	86
Stack Temp, deg F	838.67
Exhaust Flow, acfm	590,179
Stack Velocity, ft/s	91.96

Toxic Air Contaminant Emissions from Each Turbine						
Max Fuel Flow (HHV)		**480.6**	**MMBtu/hr**			
Maximum annual hours of operation		**1098.25**	**hr/yr**			
Pollutant	**CAS**	**Emission Factor (lb/MMBtu)**	**Emission Factor (lb/MMcf)**	**Emission factor source**	**Hourly Emission Rate (lb/hr)**	**Annual Emission Rate (lb/yr)**
Ammonia *	7664417			max TBACT level	3.64	4.00E+03
1,3-Butadiene	106990	4.30E-07		AP-42	2.07E-04	2.27E-01
Acetaldehyde	75070	4.00E-05		AP-42	1.92E-02	2.11E+01
Acrolein	107028	3.62E-06		AP-42	1.74E-03	1.91E+00
Benzene	71432	3.26E-06		AP-42	1.57E-03	1.72E+00
Ethylbenzene	100414	3.20E-05		AP-42	1.54E-02	1.69E+01
Formaldehyde	50000	3.60E-04		AP-42	1.73E-01	1.90E+02
Propylene Oxide	75569	2.90E-05		AP-42	1.39E-02	1.53E+01
Toluene	108883	1.30E-04		AP-42	6.25E-02	6.86E+01
Xylenes	1330207	6.40E-05		AP-42	3.08E-02	3.38E+01
PAH						
Benzo(a)anthracene	56553	2.23E-08	2.26E-05	CATEF mean	1.07E-05	1.18E-02
Benzo(a)pyrene	50328	1.37E-08	1.39E-05	CATEF mean	6.60E-06	1.32E-01
Benzo(b)fluoranthene	205992	1.12E-08	1.13E-05	CATEF mean	5.37E-06	5.89E-03
Benzo(k)fluoranthene	207089	1.09E-08	1.10E-05	CATEF mean	5.22E-06	5.74E-03
Chrysene	218019	2.49E-08	2.52E-05	CATEF mean	1.20E-05	1.31E-02
Dibenz(a,h)anthracene	53703	2.32E-08	2.35E-05	CATEF mean	1.12E-05	1.23E-02
Indeno(1,2,3-cd)pyrene	193395	2.32E-08	2.35E-05	CATEF mean	1.12E-05	1.23E-02
Naphthalene	91203	1.64E-06	1.66E-03	CATEF mean	7.88E-04	8.66E-01
Total PAHs (other than naphthalene)					6.22E-05	1.93E-01

1098.25 operating hours in annual emission calculation includes 1001.5 hours of normal operations plus 129 startups (35-minute events) and 129 shutdowns (10-minute events)

Cooling Tower Stack Parameters

Parameter	Value	Units	Notes
Fan diameter:	13	Feet	7 blades each fan
Exhaust flow	230,750	ACFM per each fan	
Exhaust flow	3,800,961	Pounds/hr total for 4 fans	
Exhaust temp	87.7	DB deg F	
Circulating water rate	7740	gpm for all 4 units	
	3,870,000	pph	
Cycles	10		
TDS	922	ppm after cycling maximum GWRS	
Drift	0.0010%	% of circulating water	
Exhaust stream solids	0.0357	Pounds/hr	

Note: Conditions are for design day of 89 F DB, 36% RH
Annual cooling tower emissions based conservatively on assumed operation for 4006 hours per year (i.e., 4 x 1001.5)

Emission Rates for Cooling Tower

Toxic Air Contaminant	CAS	TAC Concentration in water[1]		Emissions per cell		Total tower emissions	
		ug/liter	lb/(1000 gallon)	lb/hr	lb/yr	lb/hr	lb/yr
Antimony	7440360	0.6	0.000005	5.81E-08	2.33E-04	2.33E-07	9.31E-04
Arsenic	7440382	4.8	0.000040	4.65E-07	1.86E-03	1.86E-06	7.45E-03
Beryllium	7440417	0.1	0.000001	9.69E-09	3.88E-05	3.88E-08	1.55E-04
Cadmium	7440439	0.1	0.000001	9.69E-09	3.88E-05	3.88E-08	1.55E-04
Chlorine	7782505	9300	0.077603	9.01E-04	3.61E+00	3.60E-03	1.44E+01
Chromium	18540299	1.1	0.000009	1.07E-07	4.27E-04	4.26E-07	1.71E-03
Cobalt **	7440484	2.2	0.000018	2.13E-07	8.54E-04	8.53E-07	3.42E-03
Copper *	7440508	28	0.000234	2.71E-06	1.09E-02	1.09E-05	4.35E-02
Cyanide	57125	46	0.000384	4.46E-06	1.79E-02	1.78E-05	7.14E-02
Fluoride *	1101	30	0.000250	2.91E-06	1.16E-02	1.16E-05	4.66E-02
Lead	7439921	1.6	0.000013	1.55E-07	6.21E-04	6.20E-07	2.48E-03
Manganese	7439965	9.2	0.000077	8.91E-07	3.57E-03	3.57E-06	1.43E-02
Mercury	7439976	0.05	0.000000	4.84E-09	1.94E-05	1.94E-08	7.76E-05
Nickel	7440020	0.1	0.000001	9.69E-09	3.88E-05	3.88E-08	1.55E-04
Selenium	7782492	16	0.000134	1.55E-06	6.21E-03	6.20E-06	2.48E-02
Silica *	7631869	970	0.008094	9.40E-05	3.76E-01	3.76E-04	1.51E+00
Sulfate *	9960	2550	0.021278	2.47E-04	9.90E-01	9.88E-04	3.96E+00
Zinc *	7440666	5	0.000042	4.84E-07	1.94E-03	1.94E-06	7.76E-03

Diesel IC Engine Stack Parameters

Parameter	Value
Flow Rate (acfm)	5,647
Exhaust Temp (degrees F)	949.8
Stack Diameter (feet)	0.833 (10 inches)
Stack height (feet)	20 (12 ft building + 8 ft stack)
fuel rate (gal/hr)	53.5
diesel Sulfur content (ppm)	15
diesel density (lb/gal)	7.1
stack height (m)	6.096
exhaust temp (K)	783.04
exit velocity (m/s)	52.59
stack diameter (m)	0.254

IC Engine Emissions

Pollutant	Diesel Engine Emission Rate (lbs/hr)	Diesel Engine Emission (lbs per 38-minute test)[1]	Diesel Engine Emissions (lb/year) [2]
Diesel Particulate (PM_{10})	0.330	0.209	66.1

Note:
[1]. If necessary, the applicant will accept a condition limiting the duration of maintenance tests for this engine to 38 minutes per test. (this is a new development that has not been previously discussed with SCAQMD).
[2]. Annual emissions based on 200 total hours/year engine operation

Model Results – Normal Operation (Impacts due to Individual CTGs)

Pollutant	Averaging Period	Maximum Predicted Concentration ($\mu g/m^3$)					Background Concentration ($\mu g/m^3$)	Most Stringent Air Quality Standard ($\mu g/m^3$) [1]	Significant Change in Air Quality Concentration ($\mu g/m^3$) [2]	Comply (Yes /No)
		CTG 1	CTG 2	CTG 3	CTG 4	All 4 CTGs				
NO_2	1-hour[2]	1.87	1.87	1.86	1.88	6.69	229.1	339	20	Yes
	Annual	0.01	0.01	0.01	0.01	0.05	46.7	57	1	Yes
CO	1-hour	2.99	2.99	2.97	3.00	10.69	8,510	23,000	1,100	Yes
	8-hour	2.17	2.17	2.18	2.17	8.13	4,544	10,000	500	Yes
SO_2	1-hour	0.64	0.64	0.63	0.64	2.28	81.2	655	n/a	Yes
	3-hour	0.48	0.49	0.49	0.49	1.81	52	1,300	n/a	Yes
	24-hour	0.21	0.21	0.21	0.21	0.82	21	105	n/a	Yes
	Annual	0.001	0.001	0.001	0.001	0.005	5.3	80	n/a	Yes
PM_{10}	24-hour	0.48	0.48	0.48	0.48	1.84	104	50	2.5	Yes
	Annual	0.01	0.01	0.01	0.01	0.03	33.9	20	1	Yes
$PM_{2.5}$	24-hour	0.48	0.48	0.48	0.48	1.84	58.9	35	n/a	Yes
	Annual	0.01	0.01	0.01	0.01	0.03	19	15	n/a	Yes

Notes:

1 In February 2007, the CARB approved new, more stringent CAAQS for NO2. The new standards, which became effective on 20 March 2008, are 339 $\mu g/m^3$ (1-hour) and 57 $\mu g/m^3$ (annual).

2 From South Coast Air Quality Management District Rule 1303 Table A-2.

Model Results – Normal Operation (Impacts due to all Project Sources)

Pollutant	Averaging Period	Maximum Predicted Impact (ug/m^3)	Background Concentration (ug/m^3)	Total Concentration (ug/m^3)
NO_2	1-hour	107.388	229.1	336.49
	Annual	0.345	46.7	47.05
CO	1-hour	77.369	8,510	8587.37
	8-hour	8.296	4,544	4552.30
SO_2	1-hour	2.280	81.2	83.48
	3-hour	1.813	52	53.81
	24-hour	0.819	21	21.82
	Annual	0.005	5.3	5.31
PM_{10}	24-hour	1.858	104	105.86
	Annual	0.037	33.9	33.94
$PM_{2.5}$	24-hour	1.858	58.9	60.76
	Annual	0.037	19	19.04

Model Results – Startup (Impacts due to Individual CTGs)

Pollutant	Averaging Period	Maximum Predicted Concentration ($\mu g/m^3$)					Background Concentration ($\mu g/m^3$)	Most Stringent Air Quality Standard ($\mu g/m^3$) [1]	Significant Change in Air Quality Concentration ($\mu g/m^3$) [2]	Comply (Yes /No)
		CTG 1	CTG 2	CTG 3	CTG 4	All 4 CTGs				
NO_2	1-hour	7.80	7.87	7.85	7.77	27.57	229.1	339	20	Yes
CO	1-hour	4.19	4.22	4.21	4.17	14.80	8,510	23,000	1,100	Yes
	8-hour	2.55	2.55	2.56	2.56	9.52	4,544	10,000	500	Yes

Model Results – Startup (All Project Sources)

Pollutant	Averaging Period	Maximum Predicted Impact (ug/m^3)	Background Concentration (ug/m^3)	Total Concentration (ug/m^3)
NO_2	1-hour	27.565	229.1	256.67
CO	1-hour	14.797	8,510	8524.80
	8-hour	9.522	4,544	4553.50

Model Results – Commissioning – All Four Turbines

Pollutant	Averaging Period	Maximum Predicted Impact (ug/m^3) All four turbines		Background Concentration (ug/m^3)	Total Concentration (ug/m^3) All four turbines	
		Baseload Test	First Fire Test		Baseload Test	First Fire Test
NO_2	1-hour	58.48	29.1	229.1	283.58	258.20
CO	1-hour	N/A	122.52	8,510	N/A	8,632.5
	8-hour	N/A	103.95	4,544	N/A	4,648.0

Model Results – Commissioning- Individual Turbines

Modeling Scenario	Pollutant	Averaging Period	Maximum Estimated Impact all 4 CTGs ($\mu g/m^3$)	Maximum Estimated Impact per CTG ($\mu g/m^3$)				Background[2]	Max Predicted Concentration for any one CTGs ($\mu g/m^3$)
				CTG 1	CTG 2	CTG 3	CTG 4	($\mu g/m^3$)	
First Fire	CO	1 hour	123	35.66	35.2	35.65	35.67	8,510	8,546
		8 hour	104	28.58	29.19	31.87	31.63	4,544	4,576
	NO_2	1 hour	29.1	8.52	8.54	8.65	8.66	229.1	237.8
Base Load AVR	NO_2	1 hour	58.5	16.7	15.7	14.8	13.4	229.1	245.8

Model Results – HRA – All Sources (Modeling redone to include additional startup/shutdownd times and to use newest version of HARP model)

Receptor	Cancer Risk (per million)	Chronic Hazard Index	Acute Hazard Index
Point of Maximum Impact	4.081	0.0081	0.01645
Residential/Sensitive	0.610	0.0014	0.01615
Off-site worker	2.337	0.0363	0.00057

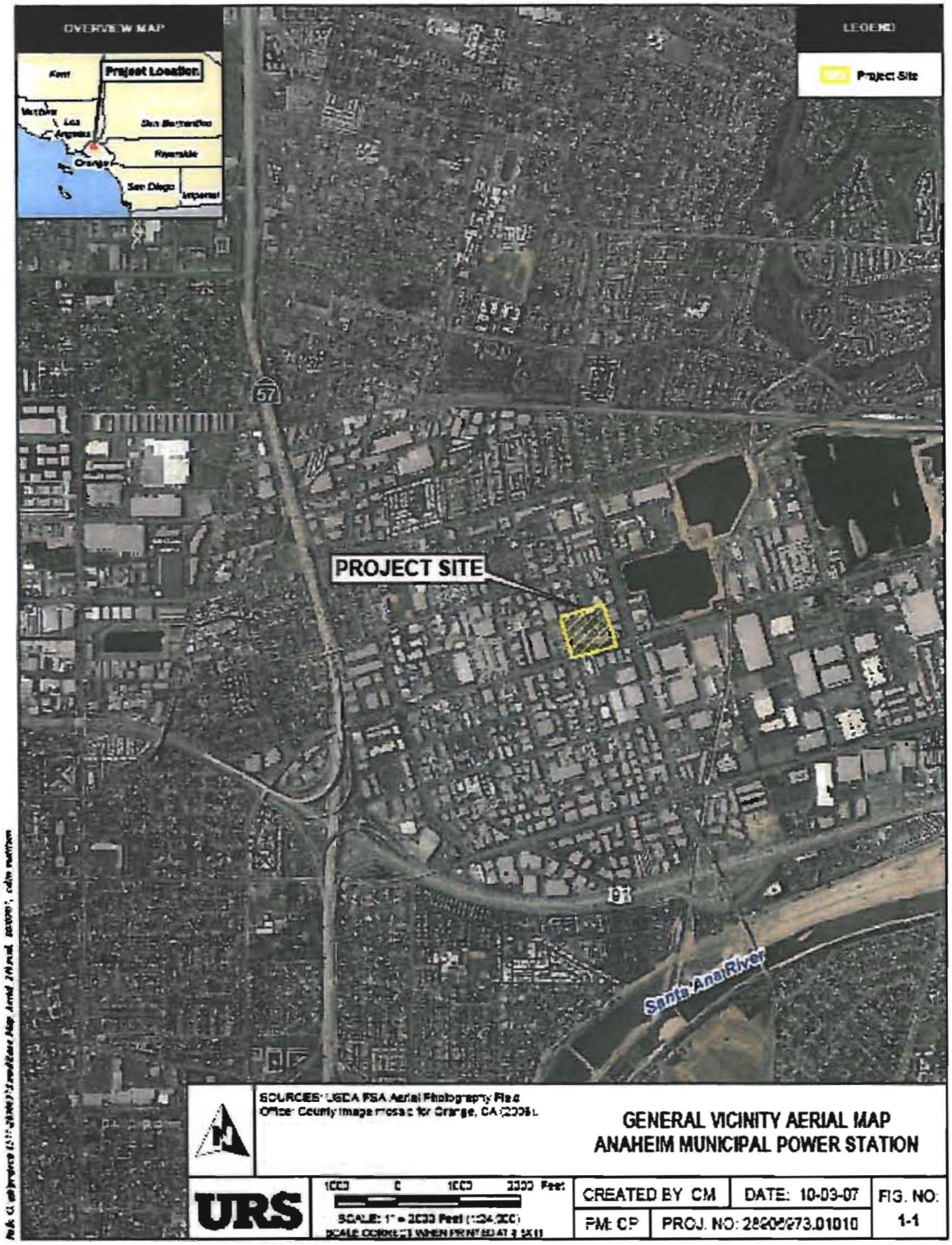
Model Results – HRA – Individual Permit Units

Location	Cancer Risk (excess risk in 1 million)	Chronic Hazard Index	Acute Risk Hazard Index
Turbine 1	0.0058	0.0001	0.0041
Turbine 2	0.0058	0.0001	0.0041
Turbine 3	0.0058	0.0001	0.0041
Turbine 4	0.0059	0.0001	0.0041
Cooling Tower	0.0290	0.0056	0.0004
Black Start Engine	6.3860	0.0040	0.0000

Revised 72-Minute Sequence of Normal Startup and Emission Control with Turbine Trip and Restart

			Stack emissions per Turbine											
Time	CT	SCR	NOx		CO		ROG		PM10		SOx @ 0.25 gr		SOx @ 1 gr	
(min)	Δ time	Δ time	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total	(#/hr)	# total
0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	1		18.00	0.30	22.00	0.37	2.50	0.04	0.63	0.01	0.07	0.00	0.28	0.00
2			18.00	0.60	22.00	0.73	2.50	0.08	0.63	0.02	0.07	0.00	0.28	0.01
4			18.00	1.20	22.00	1.47	2.50	0.17	0.63	0.04	0.07	0.00	0.28	0.02
6	5		18.00	1.80	10.24	1.81	2.25	0.24	0.63	0.06	0.07	0.01	0.28	0.03
8	2		18.00	2.40	10.24	2.15	2.25	0.32	0.63	0.08	0.07	0.01	0.28	0.04
10			50.00	4.07	4.66	2.30	0.36	0.33	1.16	0.12	0.13	0.01	0.51	0.05
12		12	26.00	4.93	6.98	2.54	0.90	0.36	1.69	0.18	0.19	0.02	0.74	0.08
14			33.00	6.03	4.69	2.69	0.90	0.39	2.22	0.25	0.24	0.03	0.97	0.11
15		3	38.00	6.67	5.36	2.78	0.90	0.40	2.48	0.29	0.27	0.03	1.09	0.13
16			15.49	6.92	5.70	2.88	0.99	0.42	2.75	0.34	0.30	0.04	1.20	0.15
17	9		16.63	7.20	6.37	2.98	1.13	0.44	3.01	0.39	0.33	0.04	1.32	0.17
18			15.93	7.47	6.37	3.09	1.17	0.46	3.01	0.44	0.33	0.05	1.32	0.19
20			14.52	7.95	6.37	3.30	1.17	0.50	3.01	0.54	0.33	0.06	1.32	0.24
22			13.11	8.39	6.37	3.51	1.17	0.54	3.01	0.64	0.33	0.07	1.32	0.28
24			11.71	8.78	6.37	3.73	1.17	0.58	3.01	0.74	0.33	0.08	1.32	0.33
26			10.30	9.12	6.37	3.94	1.17	0.61	3.01	0.84	0.33	0.09	1.32	0.37
28			8.90	9.42	6.37	4.15	1.17	0.65	3.01	0.94	0.33	0.10	1.32	0.41
30			7.49	9.67	6.37	4.36	1.17	0.69	3.01	1.04	0.33	0.11	1.32	0.46
32			6.09	9.87	6.37	4.58	1.17	0.73	3.01	1.14	0.33	0.13	1.32	0.50
34			4.68	10.03	6.37	4.79	1.17	0.77	3.01	1.24	0.33	0.14	1.32	0.55
35		18	**3.98**	**10.09**	6.37	4.89	1.17	0.79	3.01	1.29	0.33	0.14	1.32	0.57
35			0.00	10.09	0.00	4.89	0.00	0.79	0.00	1.29	0.00	0.14	0.00	0.57
36			0.00	10.09	0.00	4.89	0.00	0.79	0.00	1.29	0.00	0.14	0.00	0.57
38			0.00	10.09	0.00	4.89	0.00	0.79	0.00	1.29	0.00	0.14	0.00	0.57
40	5		0.00	10.09	0.00	4.89	0.00	0.79	0.00	1.29	0.00	0.14	0.00	0.57
40	0		0.00	10.09	0.00	4.89	0.00	0.79	0.00	1.29	0.00	0.14	0.00	0.57
41	1	0	18.00	10.39	22.00	5.26	2.50	0.83	0.63	1.30	0.07	0.14	0.28	0.57
42			18.00	10.69	10.24	5.43	2.33	0.87	0.63	1.31	0.07	0.14	0.28	0.58
43		2	6.80	10.81	11.76	5.63	2.33	0.91	0.63	1.32	0.07	0.15	0.28	0.58
44			6.80	10.92	11.76	5.82	2.33	0.95	0.63	1.34	0.07	0.15	0.28	0.59
46	5		6.80	11.15	11.76	6.21	2.33	1.03	0.63	1.36	0.07	0.15	0.28	0.60

48	2		6.80	11.37	11.76	6.61	2.33	1.10	0.63	1.38	0.07	0.15	0.28	0.60
50			18.90	12.00	3.35	6.72	0.45	1.12	1.16	1.42	0.13	0.16	0.51	0.62
52			9.83	12.33	5.03	6.89	0.90	1.15	1.69	1.47	0.19	0.16	0.74	0.65
54			12.47	12.75	4.69	7.04	0.90	1.18	2.22	1.55	0.24	0.17	0.97	0.68
56			15.49	13.26	5.70	7.23	0.99	1.21	2.75	1.64	0.30	0.18	1.20	0.72
57	9		16.63	13.54	6.37	7.34	1.13	1.23	3.01	1.69	0.33	0.19	1.32	0.74
58			15.78	13.80	6.37	7.44	1.17	1.25	3.01	1.74	0.33	0.19	1.32	0.76
60			**14.10**	**14.27**	6.37	7.66	1.17	1.29	3.01	1.84	0.33	0.20	1.32	0.81
72		15	**3.98**	**15.07**	6.365	8.9294	1.17	1.522083	3.01	2.440019	0.330261	0.267722	1.321045	1.070888


OVERVIEW MAP
Project Location
Kern
Ventura
Los Angeles
San Bernardino
Riverside
Orange
San Diego
Imperial
LEGEND
Project Site
PROJECT SITE
57
91
Santa Ana River
SOURCES: USDA FSA Aerial Photography Field Office: County Image mosaic for Orange, CA (2005).
GENERAL VICINITY AERIAL MAP
ANAHEIM MUNICIPAL POWER STATION
URS
1000 0 1000 2000 Feet
SCALE: 1" = 2000 Feet (1:24,000)
SCALE CORRECT WHEN PRINTED AT 8.5X11
CREATED BY: CM
DATE: 10-03-07
FIG. NO: 1-1
PM: CP
PROJ. NO: 28609673.01010

CPP Site and Linear Facilities Location Map

- Gas Line
- 69 kV Transmission Lines
- Potable and Fire Water Lines
- Sewer Line
- GWRS Water Line

NOTE:
The communication line is part of the 69kV line duct bank that follows Miraloma Avenue and Miller Street.

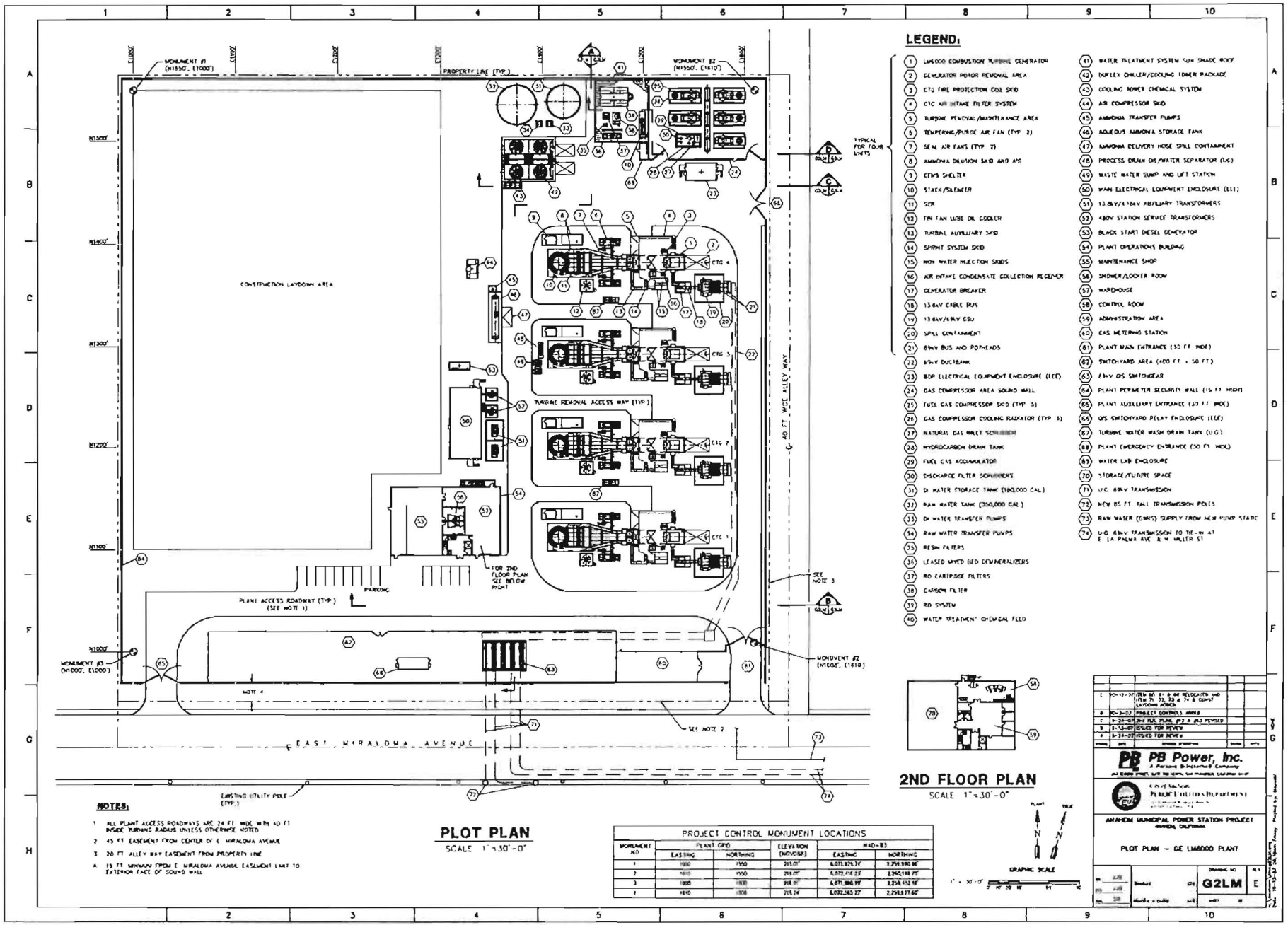
Canyon Power Plant

SCPPA SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY

PB Power

↑ *north*
not to scale

Figure 3-1
December 2007


LEGEND:
1 LM6000 COMBUSTION TURBINE GENERATOR
2 GENERATOR ROTOR REMOVAL AREA
3 CTG FIRE PROTECTION CO2 SKID
4 CTG AIR INTAKE FILTER SYSTEM
5 TURBINE REMOVAL/MAINTENANCE AREA
6 TEMPERING/PURGE AIR FAN (TYP 2)
7 SEAL AIR FANS (TYP 2)
8 AMMONIA DILUTION SKID AND AIG
9 CEMS SHELTER
10 STACK/SILENCER
11 SCR
12 FIN FAN LUBE OIL COOLER
13 TURBAL AUXILIARY SKID
14 SPRINT SYSTEM SKID
15 NOx WATER INJECTION SKIDS
16 AIR INTAKE CONDENSATE COLLECTION RECEIVER
17 GENERATOR BREAKER
18 13.8kV CABLE BUS
19 13.8kV/69kV GSU
20 SPILL CONTAINMENT
21 69kV BUS AND POTHEADS
22 69kV DUCTBANK
23 BOP ELECTRICAL EQUIPMENT ENCLOSURE (EEE)
24 GAS COMPRESSOR AREA SOUND WALL
25 FUEL GAS COMPRESSOR SKID (TYP 5)
26 GAS COMPRESSOR COOLING RADIATOR (TYP 5)
27 NATURAL GAS INLET SCRUBBER
28 HYDROCARBON DRAIN TANK
29 FUEL GAS ACCUMULATOR
30 DISCHARGE FILTER SCRUBBERS
31 DI WATER STORAGE TANK (180,000 GAL)
32 RAW WATER TANK (350,000 GAL)
33 DI WATER TRANSFER PUMPS
34 RAW WATER TRANSFER PUMPS
35 RESIN FILTERS
36 LEASED MIXED BED DEMINERALIZERS
37 RO CARTRIDGE FILTERS
38 CARBON FILTER
39 RO SYSTEM
40 WATER TREATMENT CHEMICAL FEED
41 WATER TREATMENT SYSTEM SUN SHADE ROOF
42 DUPLEX CHILLER/COOLING TOWER PACKAGE
43 COOLING TOWER CHEMICAL SYSTEM
44 AIR COMPRESSOR SKID
45 AMMONIA TRANSFER PUMPS
46 AQUEOUS AMMONIA STORAGE TANK
47 AMMONIA DELIVERY HOSE SPILL CONTAINMENT
48 PROCESS DRAIN OIL/WATER SEPARATOR (TAG)
49 WASTE WATER SUMP AND LIFT STATION
50 MAIN ELECTRICAL EQUIPMENT ENCLOSURE (EEE)
51 13.8kV/4.16kV AUXILIARY TRANSFORMERS
52 480V STATION SERVICE TRANSFORMERS
53 BLACK START DIESEL GENERATOR
54 PLANT OPERATIONS BUILDING
55 MAINTENANCE SHOP
56 SHOWER/LOCKER ROOM
57 WAREHOUSE
58 CONTROL ROOM
59 ADMINISTRATION AREA
60 GAS METERING STATION
61 PLANT MAIN ENTRANCE (35 FT WIDE)
62 SWITCHYARD AREA (400 FT x 50 FT)
63 69kV GIS SWITCHGEAR
64 PLANT PERIMETER SECURITY WALL (15 FT HIGH)
65 PLANT AUXILIARY ENTRANCE (35 FT WIDE)
66 GIS SWITCHYARD RELAY ENCLOSURE (EEE)
67 TURBINE WATER WASH DRAIN TANK (U/G)
68 PLANT EMERGENCY ENTRANCE (30 FT WIDE)
69 WATER LAB ENCLOSURE
70 STORAGE/FUTURE SPACE
71 U/G 69kV TRANSMISSION
72 NEW 85 FT TALL TRANSMISSION POLES
73 RAW WATER (GWIS) SUPPLY FROM NEW PUMP STATION
74 U/G 69kV TRANSMISSION TO TIE-IN AT E. LA PALMA AVE. & N. WALKER ST
TYPICAL FOR FOUR UNITS
MONUMENT #1 (N1550', E1000')
MONUMENT #2 (N1550', E1810')
MONUMENT #3 (N1000', E1000')
PROPERTY LINE (TYP.)
CONSTRUCTION LAYDOWN AREA
CTG 4
CTG 3
CTG 2
CTG 1
TURBINE REMOVAL ACCESS WAY (TYP.)
40 FT. WIDE ALLEY WAY
PARKING
PLANT ACCESS ROADWAY (TYP.) (SEE NOTE 1)
FOR 2ND FLOOR PLAN SEE BELOW RIGHT
SEE NOTE 3
SEE NOTE 2
NOTE 4
EAST MIRALOMA AVENUE
EXISTING UTILITY POLE (TYP.)
NOTES:
1 ALL PLANT ACCESS ROADWAYS ARE 24 FT. WIDE WITH 40 FT INSIDE TURNING RADIUS UNLESS OTHERWISE NOTED
2 45 FT EASEMENT FROM CENTER OF E. MIRALOMA AVENUE
3 20 FT. ALLEY WAY EASEMENT FROM PROPERTY LINE
4 15 FT. MINIMUM FROM E. MIRALOMA AVENUE EASEMENT LIMIT TO EXTERIOR FACE OF SOUND WALL
PLOT PLAN
SCALE 1"=30'-0"
2ND FLOOR PLAN
SCALE 1"=30'-0"
PROJECT CONTROL MONUMENT LOCATIONS
MONUMENT NO
PLANT GRID EASTING
PLANT GRID NORTHING
ELEVATION (NAVD88)
NAD-83 EASTING
NAD-83 NORTHING
1 1000 1550 213.07' 6,071,826.74' 2,259,980.18'
2 1810 1550 218.07' 6,072,636.23' 2,260,148.79'
3 1000 1100 218.21' 6,071,826.99' 2,259,432.16'
4 1810 1100 219.24' 6,072,565.27' 2,259,627.60'
PLANT NORTH
TRUE NORTH
GRAPHIC SCALE
1" = 30'-0"
PB Power, Inc.
PUBLIC UTILITIES DEPARTMENT
ANAHEIM MUNICIPAL POWER STATION PROJECT
PLOT PLAN – GE LM6000 PLANT
DRAWING NO. G2LM
REV. E

City of Anaheim
PUBLIC UTILITIES DEPARTMENT

July 3, 2008

Vicky Lee
Air Quality Engineer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178

Subject: Demonstration of Compliance with SCAQMD's Rules 1303 and 1309.1

Dear Ms. Lee:

Per SCAQMD's request, the City of Anaheim Public Utilities Department (Department) is providing this letter to demonstrate compliance with Rule 1303 and Rule 1309.1.

The Department is certifying that we are in compliance with all applicable emission limitations and standards under the Clean Air Act per SCAQMD Rule 1303(b)(5)(B) regarding Statewide Compliance with all major stationary sources that are owned or operated by this Department.

Additionally, the Department is also certifying per SCAQMD Rule 1309.1 that all sources under common ownership within the District are in compliance with all the applicable District Rules, variances, orders and settlement agreements.

If you have any questions, I can be reached at 714-765-5177.

Sincerely,

Steve Sciortino
Responsible Official
Integrated Resources Manager
City of Anaheim Public Utilities Department

201 S. Anaheim Boulevard, Suite 1101
Anaheim, California 92805
TEL (714) 765-5137
www.anaheim.net

Technical Area: Biological Resources

Background: A question arose regarding USACOE permit requirements and the potential for impacts from jack and bore under Carbon Creek.

Data Request BIO-1: What is the distance from the receiving pit to the bank of Carbon Creek?

Response: The bore pit is approximately 15 feet from Carbon Creek. The receiving pit is approximately 40 feet from Carbon Creek.

Also attached is a summary of the meeting between the City of Anaheim, California Department of Fish and Game, and the URS Task Leader for biology. As requested during this meeting a 1602 Streambed Alteration Notification has been prepared for the CPP. A copy of this document is also included.

Anaheim/Canyon Power Plant
Meeting Minutes

LOGISTICS

Meeting Date: 30 June 2008
Time: 10:00am.-10:45am.
Location: Carbon Creek/Miraloma Avenue
Objective: CDFG Concurrence with no-impact determination

ATTENDEES

The following attendees participated:

Name	Office
Lincoln Hulse	URS Corporation
Suzanne Wilson	City of Anaheim
Larry Davis	City of Anaheim
Naeem Siddiqui	CDFG

SUMMARY OF MEETING

Discussion:

The following items were topics of discussion:

1) California Department of Fish and Game Code (CDFC) jurisdiction pursuant to Division 2, Chapter 6, Sections 1600-1602

The California Department of Fish and Game (CDFG) regulates all substantial diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife. Larry Davis (City of Anaheim) described the Anaheim Power Plant project to Naeem Siddiqui (CDFG), as related to Carbon Creek, including the Jack and Bore (JB) methods. The JB is not expected to impact Carbon Creek. Lincoln Hulse (URS) described the avoidance

measure and BMP's that will be implemented during the JB activities. These avoidance measures and BMP's include:

- The operator shall have a Biological monitor on-site during all drilling and boring activities.
- If a frac out occurs during the boring, the Biological monitor will order the equipment to be shut down.
- The biological monitor's duties shall include: Visual inspection along the drill path, including monitoring the water body (if present) for evidence of release and continuous examination of drilling fluids pressures and return flows, approving drilling/boring setup locations, verifying that the perimeter of the work site is adequately flagged prior to equipment set up to prevent impacts to the adjacent Carbon Creek.
- Prior to start up containment measures will be installed to prevent drilling fluids or hazardous materials from spilling.
- All drilling fluids and additives stored on-site must be in closed containers.
- All sump and exit pits must be capable of containing at least 100% of the drilling fluids being used, and adequate capacity in on-site vac trucks or tanks must be available to handle any frac-out cleanup.
- Every member of the contractor's drilling crew and each inspector is responsible for reporting spills or frac-outs. An observed loss in drilling pressure or a slow down or loss of returned drilling mud should trigger an immediate survey of the work area for frac-outs.
- Buckets, sump pumps or vac trucks will be used to remove and dispose of any drilling fluids. Adequate containment materials (straw bales, waddles, silt fence etc.) will be stored on-site or within minutes of the site. Vac-trucks or tanks should have sufficient hose length to reach at least half the distance of the bore.
- All equipment will be staged outside the 20ft exclusion from Carbon Creek, in the road shoulder, inside the ROW.

Naeem confirmed that CDFG will not assert jurisdiction over Carbon creek for the proposed JB activities; therefore, a CDFG permit would not be required. Naeem stated that the applicant needs to submit a CDFC 1602 application package to him. He will then respond with a CDFG letter of *non-jurisdiction/no-impact.*

ACTION ITEMS

1. The applicant needs to prepare a CDFC 1602 application package to be submitted to CDFG along with a $100.00 application fee.

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

NOTIFICATION OF LAKE OR STREAMBED ALTERATION

Complete EACH field, unless otherwise indicated, following the enclosed instructions and submit ALL required enclosures. Attach additional pages, if necessary.

1. APPLICANT PROPOSING PROJECT

Name			
Business/Agency	Southern California Public Power Authority		
Street Address	225 South Lake Avenue, Suite 1250		
City, State, Zip	Pasadena, CA 91101		
Telephone	626-793-9364	Fax	
Email			

2. CONTACT PERSON *(Complete only if different from applicant)*

Name	Lincoln Hulse		
Business/Agency	URS Corporation		
Street Address	2020 East First Street, Suite 400		
City, State, Zip	Santa Ana, CA 92705		
Telephone	(714) 648-2824	Fax	(714) 433-7701
Email	Lincoln_Hulse@urscorp.com		

3. PROPERTY OWNER (*Complete only if different from applicant*)

Name	City of Anaheim		
Business/Agency			
Street Address	201 S. Anaheim Blvd. Suite 701		
City, State, Zip	Anaheim, CA 92805		
Telephone	714-765-5112	Fax	
Email			

4. PROJECT NAME AND AGREEMENT

A. Project Name		Canyon Power Plant		
B. Agreement Term Requested		☒ Regular *(5 years or less)* ☐ Long-term *(greater than 5 years)*		
C. Project Term		D. Seasonal Work Period		E. Number of Work Da
Beginning (*year*)	Ending (*year*)	Start Date (*month/day*)	End Date (*month/day*)	
2009	2010	July 2009	February 2010	240

5. AGREEMENT TYPE

Check the applicable box. If box B, C, D, or E is checked, complete the specified attachment.		
A.	☒ Standard *(Most construction projects, excluding the categories listed below)*	
B.	☐ Gravel/Sand/Rock Extraction (*Attachment A*)	*Mine I.D. Number:*
C.	☐ Timber Harvesting (*Attachment B*)	THP *Number:*
D.	☐ Water Diversion/Extraction/Impoundment (*Attachment C*)	*SWRCB Number:*
E.	☐ Routine Maintenance (*Attachment D*)	
F.	☐ DFG Fisheries Restoration Grant Program (*FRGP*)	*FRGP Contract Number:*
G.	☐ Master	
H.	☐ Master Timber Harvesting	

6. FEES

Please see the current fee schedule to determine the appropriate notification fee. Itemize each project's estimate cost and corresponding fee. *Note: The Department may not process this notification until the correct fee has been received.*

	A. Project	B. Project Cost	C. Project Fee
1.	Project will not impact any CDFG Jurisdiction		$100.00
2.			
3.			
4.			
5.			
		D. Base Fee *(if applicable)*	
		E. TOTAL FEE ENCLOSED	$100.00

7. PRIOR NOTIFICATION OR ORDER

A. Has a notification previously been submitted to, or a Lake or Streambed Alteration Agreement previously been issued by, the Department for the project described in this notification?

☐ Yes (Provide the information below ☒ No

Applicant:_ Notification Number: Date:

B. Is this notification being submitted in response to an order, notice, or other directive ("order") by a court or administrative agency (including the Department)?

☒ No ☐ Yes (*Enclose a copy of the order, notice, or other directive. If the directive is not in writing, identify the person who directed the applicant to submit this notification and the agency he or she represents, and describe the circumstances relating to the order.*)

☐ *Continued on addit*

8. PROJECT LOCATION

A. Address or description of project location.
(Include a map that marks the location of the project with a reference to the nearest city or town, and provide driving directions from a major road or highway)

The Canyon Power Plant (CPP) site is located in an industrial land use area located between Kraemer and Blue Gum Streets along Miraloma Avenue in the City of Anaheim, Orange County, California. Similarly, the associated linear facilities are located within heavy industrial and commercial land use areas. The recycled water line extends from the southern portion of the proposed power plant facility and continues east along Miraloma Avenue to the eastern edge of the Orange County Water District's Kraemer Basin Ground Recharge Facility. The natural gas line extends from the southern portion of the power plant site east along Miraloma Avenue, and north along Kraemer Boulevard to East Orangethorpe Avenue where it ties into a SCGC transmission line The 69 kV line extends from the southern portion of the power plant site east along Miraloma Avenue, and south along Miller Street, to La Palma Avenue where it ties into an existing Dowling-Yorba 69 kV line. The project area is located within the United States Geological Survey (USGS) 7.5-minute Orange Topographic Map, Township 3 South, Range 9 West. It occurs at an approximate elevation of 210 feet above mean sea level.

☐ *Continued on ad*

B. River, Stream, or lake affected by the project.	Carbon Creek, however no impacts to Carbon creek are anticipated.
C. What water body is the river, stream or lake tributary to?	Santa Ana River
D. Is the river or stream segment affected by the project listed in the state or federal Wild and Scenic Rivers Acts?	☐ Yes ☒ No ☐ Unknown
E. County	Orange

F. USGS 7.5 Minute Quad Map Name	G. Township	H. Range	I. Section	J. ¼ Section
Orange	3 South	9 West		

☐ *Continued on additional page(s)*

K. Meridian (*check one*) ☐ Humboldt ☐ Mt. Diablo ☒ San Bernardino

L. Assessor's Parcel Number(s)

N/A

☐ *Continued on additional page(s)*

M. Coordinates (*If available, provide at least latitude/longitude or UTM coordinates and check appropriate boxes*)

Latitude/Longitude	*Latitude:* 33.8566	*Longitude:* -117.8661		
	☐ Degrees/Minutes/Seconds Minutes	☒ Decimal Degrees	☐ Decimal	
UTM	*Easting:* 419882	*Northing:* 3746594	☐ Zone 10	☒ Zone 11
Datum used for Latitude/Longitude or UTM	☐ NAD 27	☒ NAD 83 or WGS 84		

9. PROJECT CATEGORY AND WORK TYPE *(Check each box that applies)*

PROJECT CATEGORY	NEW CONSTRUCTION	REPLACE EXISTING STRUCTURE	REPAIR/MAINTAIN EXISTING STRUCTURE
Bank stabilization – bioengineering/ recontouring	☐	☐	☐
Bank stabilization – rip-rap/retaining wall/gabion	☐	☐	☐
Boat dock/pier	☐	☐	☐
Boat ramp	☐	☐	☐
Bridge	☐	☐	☐
Channel clearing/vegetation management	☐	☐	☐
Culvert	☐	☐	☐
Dam	☐	☐	☐
Debris basin	☐	☐	☐
Diversion structure – weir or pump intake	☐	☐	☐
Filling of wetland, river, stream, or lake	☐	☐	☐
Geotechnical survey	☐	☐	☐
Habitat enhancement – revegetation/mitigation	☐	☐	☐
Levee	☐	☐	☐
Low water crossing	☐	☐	☐
Road/trail	☐	☐	☐
Sediment removal – pond, stream, or marina	☐	☐	☐
Storm drain outfall structure	☐	☐	☐
Temporary stream crossing	☐	☐	☐
Utility crossing: Horizontal Directional Drilling	☐	☐	☐
Jack/bore	☒	☐	☐
Open trench	☐	☐	☐
Other (*specify*):	☐	☐	☐

10. PROJECT DESCRIPTION

A. Describe the project in detail. Photographs of the project location and immediate surrounding area should be included.

- Include any structures (e.g., rip-rap, culverts, or channel clearing) that will be placed, built, or completed in or near the stream, river, or lake.
- Specify the type and volume of materials that will be used.
- If water will be diverted or drafted, specify the purpose or use.

Enclose diagrams, drawings, plans, and/or maps that provide all of the following: site specific construction details; the dimensions of each structure and/or extent of each activity in the bed, channel, bank or floodplain; an overview of the entire project area (i.e., "bird's-eye view") showing the location of each structure and/or activity, significant area features, and where the equipment/machinery will enter and exit the project area.

The Canyon Power Plant Project (Project) consists of an approximately 10-acre power plant and laydown area, in addition to three associated linear facilities- a water line, a 69 kV communication line, and a natural gas line. The Project will encompass the installation of four transmission lines installed beneath Carbon Creek Channel by jack and bore (J&B) drilling (attached figure1). Because Project design entails J&B under the culvert section of Carbon Creek at Miraloma Boulevard, no areas subject to California Department of Fish and Game (CDFG) jurisdiction. No impacts to Carbon Creek are anticipated as a result of the proposed Project.

Avoidance Measures:

The operator shall have a Biological monitor on-site during all drilling and boring activities. If a frac out occurs during the boring, the Biological monitor will order the equipment to be shut down. The biological monitor's duties shall include: Visual inspection along the drill path, including monitoring the water body (if present) for evidence of release and continuous examination of drilling fluids pressures and return flows, approving drilling/boring setup locations, verifying that the perimeter of the work site is adequately flagged prior to equipment set up to prevent impacts to the adjacent Carbon Creek.

Other measures include:

- Prior to start up containment measures will be installed to prevent drilling fluids or hazardous materials from spilling.
- All drilling fluids and additives stored on-site must be in closed containers.
- All sump and exit pits must be capable of containing at least 100% of the drilling fluids being used, and adequate capacity in on-site vac trucks or tanks must be available to handle any frac-out cleanup.
- Every member of the contractor's drilling crew and each inspector is responsible for reporting spills or frac-outs. An observed loss in drilling pressure or a slow down or loss of returned drilling mud should trigger an immediate survey of the work area for frac-outs.
- Buckets, sump pumps or vac trucks will be used to remove and dispose of any drilling fluids. Adequate containment materials (straw bales, waddles, silt fence etc.) will be stored on-site or within minutes of the site. Vac-trucks or tanks should have sufficient hose length to reach at least half the distance of the bore.
- All equipment will be staged outside the 20ft exclusion from Carbon Creek, in the road shoulder, inside the ROW.

☒ *Continued on additional page(s)*

B. Specify the equipment and machinery that will be used to complete the project.

Backhoe, Excavator, Dump Trucks, Crane (100 + ton), and a Hydrolic Bore Machine & Welder

☐ *Continued on additional page(s)*

C. Will water be present during the proposed work period (specified in box 4.D) in the stream, river, or lake (specified in box 8.B).

☐ Yes ☒ No *(Skip to box 11)*

D. Will the proposed project require work in the wetted portion of the channel?	☐ Yes (*Enclose a plan to divert water around work site*) ☒ No

11. PROJECT IMPACTS

A. Describe impacts to the bed, channel, and bank of the river, stream, or lake, and the associated riparian habitat.
Specify the dimensions of the modifications in length (linear feet) and area (square feet or acres) and the type and volume of material (cubic yards) that will be moved, displaced, or otherwise disturbed, if applicable.

As discussed above, no areas subject to CDFG jurisdiction within Carbon Creek will be impacted by the Project. Therefore, no impacts to Carbon Creek are anticipated as a result of the proposed Project.

☐ *Continued on additional page(s)*

B. Will the project affect any vegetation? ☐ Yes (*Complete the tables below*) ☒ No

Vegetation Type	Temporary Impact	Permanent Impact
	Linear feet: __ Total area: __	Linear feet: ___ Total area: ___
	Linear feet: __ Total area: __	Linear feet: __ Total area: ___

Tree Species	Number of Trees to be Removed	Trunk Diameter (range)

☐ *Continued on additional page(s)*

C. Are any special status animal or plant species, or habitat that could support such species, known to be present on or near the project site?

☐ Yes (*List each species and/or describe the habitat below*) ☒ No ☐ Unknown

☐ *Continued on additional page(s)*

D. Identify the source(s) of information that supports a "yes" or "no" answer above in Box 11.C.

Pedestrian-based biological field surveys of the project area were conducted by URS biologist Greg Hoisington on September 25, 2007 according to CEC regulations (CEC, 2000).

☐ *Continued on additional page(s)*

E. Has a biological study been completed for the project site?

☒ Yes (*Enclose the biological study*)) ☐ No

Note: A biological assessment or study may be required to evaluate potential project impacts on biological resources.

F. Has a hydrological study been completed for the project or project site?

☒ Yes (*Enclose the hydrological study*)) ☐ No

Note: A hydrological study or other information on site hydraulics (e.g., flows, channel characteristics,

and/or flood recurrence intervals) may be required to evaluate potential project impacts on hydrology.

12. MEASURES TO PROTECT FISH, WILDLIFE, AND PLANT RESOURCES

A. Describe the techniques that will be used to prevent sediment from entering watercourses during and after construction.

Avoidance Measures:

The operator shall have a Biological monitor on-site during all drilling and boring activities. If a frac out occurs during the boring, the Biological monitor will order the equipment to be shut down. The biological monitor's duties shall include: Visual inspection along the drill path, including monitoring the water body (if present) for evidence of release and continuous examination of drilling fluids pressures and return flows, approving drilling/boring setup locations, verifying that the perimeter of the work site is adequately flagged prior to equipment set up to prevent impacts to the adjacent Carbon Creek.

Other measures include:

- Prior to start up containment measures will be installed to prevent drilling fluids or hazardous materials from spilling.
- All drilling fluids and additives stored on-site must be in closed containers.
- All sump and exit pits must be capable of containing at least 100% of the drilling fluids being used, and adequate capacity in on-site vac trucks or tanks must be available to handle any frac-out cleanup.
- Every member of the contractor's drilling crew and each inspector is responsible for reporting spills or frac-outs. An observed loss in drilling pressure or a slow down or loss of returned drilling mud should trigger an immediate survey of the work area for frac-outs.
- Buckets, sump pumps or vac trucks will be used to remove and dispose of any drilling fluids. Adequate containment materials (straw bales, waddles, silt fence etc.) will be stored on-site or within minutes of the site. Vac-trucks or tanks should have sufficient hose length to reach at least half the distance of the bore.
- All equipment will be staged outside the 20ft exclusion from Carbon Creek, in the road shoulder, inside the ROW.

☒ *Continued on additional page(s)*

B. Describe project avoidance and/or minimization measures to protect fish, wildlife, and plant resources.

See A above

☐ *Continued on additional page(s)*

C. Describe any project mitigation and/or compensation measures to protect fish, wildlife, and plant resources.

See A above

☐ *Continued on additional page(s)*

13. PERMITS

List any local, state and federal permits required for the project and check the corresponding box(es). Enclose a copy of each permit that has been issued.

A. California Energy Commission Application for Certification ☒ Applied

B. _____ ☐ Applied

C. _____ ☐ Applied

D. Unknown whether ☐ local, ☐ state, or ☐ federal permit is needed for the project. (Check each box that applies)

☐ *Continued on additional page(s)*

14. ENVIRONMENTAL REVIEW

A. Has a draft or final document been prepared for the project pursuant to the California Environmental Quality Act (CEQA), National Environmental Protection Act (NEPA), California Endangered Species Act (CESA) and/or federal Endangered Species Act (ESA)?

☒ Yes (*Check the box for each CEQA, NEPA, CESA, and ESA document that has been prepared and enclose a copy of each*) **The Application for Certification is CEQA equivalent.**

☐ No (*Check the box for each CEQA, NEPA, CESA, and ESA document listed below that will be or is being prepared)*

☐ Notice of Exemption	☐ Mitigated Negative Declaration	☐ NEPA document (*type*):
☐ Initial Study	☐ Environmental Impact Report	☐ CESA document (*type*):
☐ Negative Declaration	☐ Notice of Determination (*Enclose*)	☐ ESA document (*type*):
☐ THP / NTMP	☐ Mitigation, Monitoring, Report Plan	

B. State Clearinghouse Number (*if applicable*)			
C. Has a CEQA lead agency been determined?	☐ Yes (*Complete boxes D, E, and F*) ☒ No (*Skip to box 14.G*)		
D. CEQA Lead Agency			
E. Contact Person		F. Telephone Number	

G. If the project described in this notification is part of a larger project or plan, briefly describe that larger project or plan.

☐ *Continued on additional page(s)*

H. Has an environmental filing fee (Fish and Game Code section 711.4) been paid?

☒ Yes (*Enclose proof of payment*) ☐ No (*Briefly explain below the reason a filing fee has not been paid*)

The filing fee ($100.00) is attached to this application.

Note: If a filing fee is required, the Department may not finalize a Lake or Streambed Alteration Agreement until the filing fee is paid

15. SITE INSPECTION

Check one box only.

☐ In the event the Department determines that a site inspection is necessary, I hereby authorize a Department representative to enter the property where the project described in this notification will take place at any reasonable time, and hereby certify that I am authorized to grant the Department such entry.

☒ I request the Department to contact Lincoln Hulse at 714.648.2824 to schedule a date and time to enter the property where the project described in this notification will take place. I understand that this may delay the Department's determination as to whether a Lake or Streambed Alteration Agreement is required and/or the Department's issuance of a draft agreement pursuant to this notification.

16. DIGITAL FORMAT

Is any of the information included as part of the notification available in digital format (i.e., CD, DVD, etc.)?

☒ Yes (Please enclose the information via digital media with the completed notification form)

17. SIGNATURE

I hereby certify that to the best of my knowledge the information in this notification is true and correct and that I am authorized to sign this notification as, or on behalf of, the applicant. I understand that if any information in this notification is found to be untrue or incorrect, the Department may suspend processing this notification or suspend or revoke any draft or final Lake or Streambed Alteration agreement issued pursuant to this notification. I understand that this notification applies only to the project(s) described herein and that I and/or the applicant may be subject to civil or criminal prosecution for undertaking any project not described herein unless the Department has been separately notified of that project in accordance with Fish and Game Code section 1602 or 1611.

Stephen Scrivano — 8/7/08

Signature of Applicant or Applicant's authorized Representative — Date

Stephen J. Scrivano

Print Name

Technical Area: Biological Resources

Data Request BIO-2: What kind of bentonite clay will be used in the jack and bore operation?

Response: Bentonite slurry with a low silica content.

Technical Area: Hazardous Materials Management

Background: Revised table 6.15-2 did not include 38% hydrochloric acid and 25% sodium hydroxide..

Data Request HAZ-1: Why were they removed and what will be used in their place?

Response: Attached are revised Tables 6.15-1 and 6.15-2 that include 38% hydrochloric acid and 50% sodium hydroxide. It is the intent of the CPP to have these items included on the list of hazardous materials stored on site.

TABLE 6.15-1
TOXICITY OF HAZARDOUS AND ACUTELY HAZARDOUS MATERIALS ON-SITE

Hazardous Materials	Project Phase	Toxicity	OSHA	DOT Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Acetylene	Construction & Operation	No known toxic effects.	N/A	Flammable	1	4	3	74-86-2
Antiscalant (Acrylate polymers and Phosphonate)	Operation	Low toxicity	N/A	N/A	1	0	0	Mixture
Aqueous Ammonia (19%)	Operation	Corrosive to eyes and skins, very toxic by inhalation and ingestion.	50 ppm	Nonflammable	2	0	0	7664-41-7
Diesel Fuel #2	Construction & Operation	Low-toxicity	N/A	Flammable liquid	0	2	0	Mixture
Dispersant/Corrosion Inhibitor (Acrylic polymer)	Operation	N/A	N/A	N/A	N/A	N/A	N/A	9011-14-7
Dryer desiccant	Operation	Dust may cause irritation. Dust is irritating to the respiratory tract. Expected to be ingestion hazardous. Possible cancer hazard.	N/A	Not regulated	2	0	0	Silica, amorphous 7631-86-9 Cobaltous chloride 7646-79-9
Hydraulic Oil	Construction & Operation	Not expected to be an irritant.	5 mg/m^3	Not regulated	0	1	0	Mixture

TABLE 16.15-1 (CONTINUED)
TOXICITY OF HAZARDOUS AND ACUTELY HAZARDOUS MATERIALS ON-SITE

Hazardous Materials	Project Phase	Toxicity	OSHA	DOT Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Hydrochloric Acid (38%)	Operation	Corrosive. Causes eye and skin burns. Causes digestive and respiratory tract burns. Corrosive to metal. May be fatal if inhaled or swallowed.	7 g/m^3	Corrosive	3	0	1	7647-01-0
Lubrication Oil	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mineral Oil	Operation	Causes eye and skin irritation. Inhalation of a mist of this material may cause irritation of the lungs.	N/A	N/A	0	1	0	8042-47-5
Motor oil EasyMix 2-Cycle Motor Oil	Construction	Hazardous	N/A	N/A	0	2	0	64742-47-8
Natural gas (Methane)	Operation	Flammable. Asphyxiant. Effects are due to lack of oxygen.	Not carcinogenic	Flammable gases	1	4	0	74-82-8
Non-oxidizing biocide(Isothiazolin)	Operation	Corrosive	N/A	N/A	N/A	N/A	N/A	26172-55-4
Oily rags and oil absorbents	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paint	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	Mixture
Polymer Thickening Aid (Polymer of Acrylate)	Operation	Low toxicity	N/A	N/A	1	2	0	25085-02-3

TABLE 16.15-1 (CONTINUED)
TOXICITY OF HAZARDOUS AND ACUTELY HAZARDOUS MATERIALS ON-SITE

Hazardous Materials	Project Phase	Toxicity	OSHA	DOT Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Propane	Operation	Low-toxicity	1,000 ppm	Flammable	1	4	0	74-98-6
Propylene-glycol	Operation	Low-toxicity	N/A	Not regulated	0	1	0	57-55-6
RO Membrane Cleaners(Tetrasodium Ethylenediamine Tetraacetate)	Operation	Corrosive	N/A	N/A	3	0	0	64-02-8
Sodium Bisulfite (38%)	Operation	Harmful if swallowed. Contact with acids liberates toxic gas. Irritating to eyes, respiratory system and skin. Possible sensitizer.	15 mg/m^3	Corrosive	2	0	1	7631-90-5
Sodium Hypochlorite (12%)	Operation	Toxic and corrosive.	1.5 mg/m^3 as Cl_2	Corrosive	3	0	0	7681-52-9
Sodium Hydroxide (50%)	Operation	Irritant and corrosive.	2 mg/m^3	Corrosive	3	0	1	1310-73-2
Sulfuric Acid (93%)	Operation	Irritant to eyes, poisonous via inhalation, and extremely irritant, corrosive and toxic to tissue.	1 mg/m^3	Corrosive	3	0	2	7664-93-9
Sulfur Hexafluoride	Operation	Asphyxiant. Effects are due to lack of oxygen. No other health effects are currently known.	1,000 ppm	Non-flammable gas	1	0	0	2551-62-4
Transmission fluid	Construction	Low toxicity	N/A	N/A	1	1	0	64742-65-0

TABLE 16.15-1 (CONTINUED)
TOXICITY OF HAZARDOUS AND ACUTELY HAZARDOUS MATERIALS ON-SITE

Hazardous Materials	Project Phase	Toxicity	OSHA	DOT Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Unleaded gasoline	Construction	Irritant	5 mg/m³	Flammable liquid	1	3	0	Mixture
Various detergents	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste fluids (i.e., motor oil, transmission fluid, hydraulic fluid, and antifreeze)	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste paint, thinners and solvents	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste welding materials	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[1] NFPA hazardous rating:

- Health: 4-deadly; 3-extreme danger; 2-hazardous; 1-slightly hazardous; 0-normal material
- Fire (Flash Point Temp.): 4-below 73F; 3-73 to 100F; 2- 101 to 200F; 1-over 200F; 0-will not burn
- Reactivity: 4-may detonate; 3-shock or heat may detonate; 2- violent chemical reactivity; 1-unstable if heated; 0-stable

DOT = Department of Transportation
g/m³ = grams per cubic meter
mg/m³ = milligrams per cubic meter
N/A = not applicable
NFPA = National Fire Protection Association
OSHA = Occupational Safety and Health Administration
ppm = parts per million

TABLE 6.15-2
SUMMARY OF HAZARDOUS MATERIALS STORED ON-SITE

Hazardous Material	Primary Application	Storage Type	Maximum Storage Quantity
Acetylene	Welding	Cylinder	270 cf
Antiscalant (neat)	RO system	Portable tote tank	400 gal
Aqueous ammonia (19%)	NO_x reduction in SCR	Aboveground tank	10,000 gal
Diesel fuel	Black start generator	Skid Base Mounted Tank	500 gal
Dispersant/corrosion Inhibitor (neat)	Scale/corrosion control (cooling tower water)	Portable tote tank	400 gal
Dryer desiccant	Instrument air	Instrument air dryer	300 lbs
Hydraulic fluid	Misc plant equipment	Drums inside secondary containment	110 gal
Hydrochloric acid (38%)	pH control	Plastic container	400 gal
Mineral oil	Power Transformers	Transformer internal volume	35,000 gal
Motor oil	Misc vehicles and equipment	Vehicle volume & drum inside secondary containment	110 gal
Natural gas	Fuel for power plant	Pipeline	N/A
Biocide	Biocide for cooling system	Portable tote tank	400 gal
Paint	Painting	Cans in storage locker	50 gal
Propane		Cylinder	75 lbs
Propylene glycol	Auxiliary cooling closed cooling water system	Closed cooling water system	3,000 (initial fill)
RO membrane cleaners (neat)	RO system	Portable tote tank	400 gal
Sodium bisulfite (38%)	Dechlorination (RO system)	Portable tote tank	400 gal
Sodium hydroxide (50%)	Water treatment, pH control	Portable tote tank	400 gal
Sodium hypochlorite (12.5%, trade)	Biocide/biofilm control (raw water tank, circulating water, MF system)	Portable tote tank	400 gal
Sulfur hexafluoride	Switchyard SF6 breakers	Stored in equipment	6,000 lbs
Sulfuric acid (93%)	pH Control (Cooling tower makeup, MF system, RO system)	Portable tote tank	400 gal

TABLE 6.15-2 (CONTINUED)
SUMMARY OF HAZARDOUS MATERIALS STORED ON-SITE

Hazardous Material	Primary Application	Storage Type	Maximum Storage Quantity
Transmission fluid	Misc vehicles and equipment	Vehicle volume & drum inside secondary containment	100 gal
Turbine synthetic lube oil	Rotating equipment	Equipment storage tank	600 gal
Generator mineral lube oil	Rotating equipment	Equipment storage tank	2,000 gal
Turbine hydraulic oil	Rotating equipment	Equipment storage tank	200 gal
Unleaded gasoline	Misc vehicles and equipment	Vehicle volume & drum inside secondary containment	200 gal
Various detergents	Combustion turbine cleaning	Drum storage container	220 gal
Various hazardous wastes	Misc waste	Steel drums	45 gal

[1] Expected based on presumed operation conditions. Usage and storage will be optimized during final design.

Technical Area: Soil and Water Resources

Data Request SOILS-1: Why can't the CPP utilize recycled water for construction?

Response: Please see attached email from the Orange County Water District.

Scott,
Here's the email we needed stating GWRS is not approved for construction water usage.

From: Youngblood, David [mailto:DYoungblood@ocwd.com]
Sent: Wednesday, July 02, 2008 1:56 PM
To: Suzanne Wilson
Subject: RE: GWRS for Construction use

Suzanne-
That is correct. OCWD would not approve the use of GWRS water for construction purposes. Let me know if you need anything else.
Dave

David Youngblood, P.E.
Director of Engineering
Orange County Water District
(714) 378-8245 direct
(714) 514-9697 mobile
dyoungblood@ocwd.com

From: Suzanne Wilson [mailto:SWilson@anaheim.net]
Sent: Tuesday, July 01, 2008 3:43 PM
To: Youngblood, David
Subject: GWRS for Construction use

David,

Per our recent telephone conversation, it is my understanding that OCWD's GWRS water is not intended to be used for construction related water uses for the Canyon Power Plant project. Therefore, OCWD will not approve the use of GWRS water for construction related water uses.

Please concur that my understanding is correct.

Thanks.

Any questions, I can be reached at 714-765-4112.

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAWS. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, forwarding, or copying of this communication is strictly prohibited. If you have received this communication in error,

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CANYON POWER PLANT
APPLICATION FOR CERTIFICATION
SECOND RESPONSE TO CEC DATA REQUESTS
07-AFC-9

Technical Area: Transmission

Data Request TRANS-1: When will the SIS be complete?

Response: The SIS has been submitted under separate cover.

CANYON POWER PLANT
APPLICATION FOR CERTIFICATION
SECOND RESPONSE TO CEC DATA REQUESTS
07-AFC-9

Technical Area: Waste Management

Background: On page 19 of the Supplemental Phase I there is discussion of TCE. Also in the AFC, different areas to be excavated are discussed.

Data Request WASTE-1: Is there a diagram or figure that shows these specific areas and their contamination? TPHC, SVOCs can easily be remedied with excavation; TCE should be shown to be remedied as well.

Response: Please see attached memorandum from URS Task Leader Tariq Hussain.

URS

MEMO

2020 East First St
Santa Ana, CA 92505
Phone: 714.835.6886
FAX: 714.667.7147

To: CEC

From: Tariq Hussain/URS

Subject: Impacted Soil – SCPPA Proposed Power Plant Site

Date: June 19, 2008

This memorandum briefly summarizes the impacted soil at the Proposed Power Generation /Peaker Site (Site). This assessment is based on the Phase II soil and soil vapor sampling (AMEC, 2006, 2007) and the supplemental Phase II sampling that was conducted in November 2007(URS November, 2007).

Summary of Results

Soil at the site was analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), total petroleum hydrocarbons by carbon chain (TPH-cc), and Title 22 metals at various locations and depths. In addition, there was limited soil vapor sampling conducted in selected areas of the site. The findings are summarized below. For reference, soil boring locations are shown on Figure 1 and soil vapor probe locations on Figure 2.

- **VOCs** – Data indicates there are low levels of VOCs present in the soil. The concentrations of VOCs are well below the EPA Region IX PRG values for soil at an industrial site.

- **SVOCs** – Data indicates there are low levels of SVOCs present in the soil. The concentrations of SVOCs were below EPA Region IX PRG values for soil at an industrial site, except for one detection of benzo(a)pyrene at location B-32 at 5 feet below ground surface (ft bgs).

- **PCBs** – Data indicates there is no impact to soil from PCBs; results were non-detect.

- **TPH-cc** – Data indicates soil is impacted by TPH-cc in the northern area of the site where there were automotive operations and in the northwest corner of the site. Sample locations B-5, B-27, B-29, and B-35 had TPH-cc concentrations that exceed the generally accepted level of 1,000 mg/kg for TPH heavier-range compounds; see Figure 1.

- **Title 22 Metals** – Data indicates the presence of Title 22 metals in the soil. Arsenic was the only metal with concentrations exceeding the EPA Region IX value for soil at an industrial site. However, although concentrations of lead were below the industrial PRG value, four samples had concentrations that exceeded ten times the STLC value for lead. Therefore, these samples were analyzed with the STLC method and three of the four samples B-62, B-64, and B-65, had lead concentrations exceeding the STLC limit.

URS

MEMO

2020 East First St
Santa Ana, CA 92505
Phone: 714.835.6886
FAX: 714.667.7147

- **Soil Gas Data** – AMEC completed a soil gas survey of specific areas of the site as indicated in Figure 2. Ten of the twenty five soil gas samples indicated detection of tetrachloroethylene (PCE) ranging from .046 micrograms/lit to 0.60 micrograms/lit. These levels were below the California Human Health Screening levels for commercial land use.

Recommendations

Based on the soil sampling data, the following is recommended for impacted soil at the Site.

- **VOCs** – No excavation or hazardous disposal is required due to VOCs. The Site has been impacted by operations at automotive garages but the VOC concentrations were below EPA Region IX PRGs for soil at an industrial site. The Site appears to be free of impact from the historic operations of the paint storage shed, abandoned-in-place waste oil UST, former USTs, grease trap UST, truck wash bay, and oil/water separator.

- **SVOCs** – No excavation or hazardous disposal is required due to SVOCs. The Site has been impacted by operations at automotive garages but the SVOC concentrations were below EPA Region IX PRGs for soil at an industrial site, except for one sample (B-32) that had a detection for benzo(a)pyrene above the PRG. However, this was an isolated exceedance and the area is likely to be excavated due to TPH-cc as discussed below; see Figure 1. The Site appears to be free of impact from the historic operations of the paint storage shed, abandoned-in-place waste oil UST, former USTs, grease trap UST, truck wash bay, and oil/water separator.

- **PCBs** – No excavation or hazardous disposal is required due to PCBs. The Site appears to be free of impact from the past operations of the onsite transformer.

- **TPH-cc** – As shown on Figure 2, there are three areas recommended for excavation to meet the generally accepted level of 1,000 mg/kg for TPH heavier-range compounds. The previously proposed areas for excavation are still applicable because the supplemental sampling did not identify any additional areas of concern. The Site has been impacted by operations at automotive garages but the Site appears to be free of impact from the historic operations of the abandoned-in-place waste oil UST, former USTs, grease trap UST, truck wash bay, and oil/water separator.
- **Title 22 Metals** –

URS

MEMO

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Santa Ana, CA 92505
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Lead – Based on the Phase II assessments findings, shallow, exposed soil on the residential property area appears to have been impacted by past use of lead based paint. No remediation is needed for the lead since concentrations are below the EPA Region IX PRG for lead in soil at an industrial site. However, if grading or excavation is conducted in the southwestern portion of the site by locations B-62, B-64, and B-65, shallow soil within the residential property area would need to be classified as non-RCRA, California designated hazardous waste because of the STLC lead concentrations exceeded 5 mg/L;

Arsenic - Remediation will not be necessary for arsenic because it naturally occurs at higher concentrations in Southern California soil. The highest detected concentration of arsenic at the Site was 6.55 mg/kg. However, as referenced in the Phase II report (AMEC, 2006), the Cal-EPA 1992 study indicates that arsenic concentrations range from 1.8 to 15.2 mg/kg in Southern California. Therefore, it is our recommendation that no remediation is necessary for arsenic because the detected concentrations are within the range of naturally occurring arsenic concentrations for Southern California.

- **PCE** – The presence of PCE was detected in the soil vapors at the site (AMEC 2007). Most of the areas impacted by PCE will be excavated as part of the remediation for TPH. One area that had 0.6 micrograms/lit will not be excavated because it has a concrete slab covering the soil and the area is not earmarked for any construction activity at this time. Although the levels detected are below the California Human Health Screening levels for commercial land use the concrete slab will limit exposure to onsite workers. In addition no construction or excavation is expected at that location for the proposed power plant.

References

AMEC, 2006. Limited Phase II Subsurface Soil Assessment for 3051, 3065, and 3071 East Miraloma Avenue, Anaheim, California. December 2006.

AMEC, 2007. Additional Phase II Subsurface Soil Assessment for 3051, 3065, and 3071 East Miraloma Avenue, Anaheim, California. May 2007.

URS 2007, Additional Phase Environmental Investigation Report, City of Anaheim Proposed Power Generation Site, November, 2007

EPA Region IX Preliminary Remediation Goals, October 2007.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION *For the CANYON POWER PLANT* **PROJECT**	**Docket No. 07-AFC-9** **PROOF OF SERVICE** (REVISED 7/31/2008)

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 07-AFC-9
1516 Ninth Street, MS-15
Sacramento, CA 95814-5512
docket@energy.state.ca.us

APPLICANT

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c/o City of Anaheim
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201 S. Anaheim Blvd, Suite 802
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ssciortino@anaheim.net
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APPLICANT CONSULTANT

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DECLARATION OF SERVICE

I, Marguerite Cosens, declare that on August 20, 2008, I deposited copies of the attached **SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY'S SECOND SET OF DATA RESPONSES** in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.

Marguerite Cosens

EXPLANATION

- B-26 GEOPROBE SOIL BORING
- PROJECT BOUNDARY
- BUILDING
- CHAIN LINK FENCE
- DRAIN LINE
- GRAVELLY SAND
- BARE GROUND (UNPAVED)
- 3-STAGE CLARIFIER
- 2-STAGE CLARIFIER
- STAINED SOIL
- DRUM STORAGE (55 gal. CAPACITY)
- HYDRAULIC OIL RESERVOIR
- #1 HYDRAULIC PISTON HOIST
- GREASE TRAP TANK
- CARDBOARD COMPACTOR
- FLOOR DRAIN
- INLET
- APPROXIMATE AREA OF IMPACTED SOIL TO BE EXCAVATED

TPH - TOTAL PETROLEUM HYDROCARBONS (HEAVY RANGE)

mg/kg - MILLIGRAMS PER KILOGRAM

B-27 TPH Results	
10'	8,630 mg/kg
15'	3,260 mg/kg
20'	14,700 mg/kg
24'	21,000 mg/kg

B-5 TPH Results	
15'	13,600 mg/kg

B-32 TPH Results	
5'	3,300 mg/kg

B-35 TPH Results	
5'	11,000 mg/kg
10'	8,050 mg/kg
15'	16,700 mg/kg
20'	2,930 mg/kg

B-29 TPH Results	
1'	1,100 mg/kg

B-30 TPH Results	
1'	1,700 mg/kg

B-1, B-2, B-3, B-4, B-5, B-6, B-8, B-9, B-10, B-11, B-12, B-13, B-14, B-18, B-19, B-20, B-21, B-22, B-23, B-24, B-26, B-27, B-28, B-29, B-30, B-31, B-32, B-35, B-36, B-37, B-38, B-39, B-40, #1, #2, #3, #4, #5, #6, #7, #8, #9

FORMER GASOLINE UST'S AND FUEL DISPENSERS

NEW AUTOMOTIVE GARAGE

AREA 1 (±40'x10'x28' Deep)

AREA 2 (±20'x10'x20' Deep)

AREA 3 (±6'x6'x3' Deep)

AREA 4 (±6'x6'x3' Deep)

PAINT STORAGE SHED

SCRAP FOOD EQUIPMENT STORAGE

CONCRETE PATCH (ABANDONED WASTE OIL UST)

OLD AUTOMOTIVE GARAGE

TRUCK WASH (4 BAYS)

ICE HOUSE

ICE HOUSE

20' EASEMENT

20' EASEMENT

N

SCALE: 1"=40'

Source: AMEC Earth & Environmental, Inc.

URS Corporation

Areas of TPH Impacted Soils (>1,000 mg/kg)
3051, 3065 & 3071 Miraloma Avenue
Anaheim, California

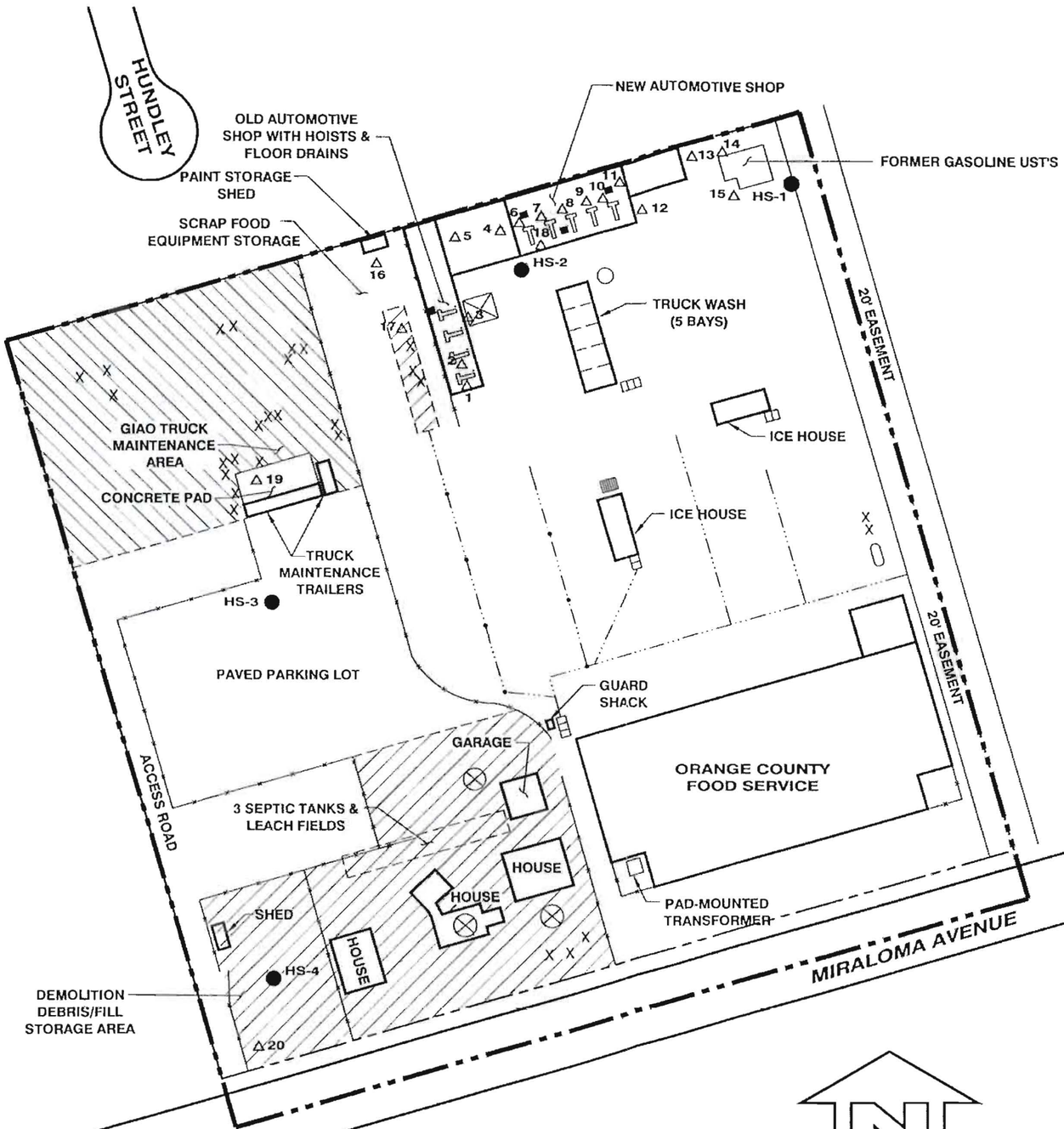
Project No.: 28906973	Date: OCTOBER 2007
Project: City of Anaheim Public Utilities Proposed Power Generation/ Peaker Site	Figure 1

URS

...007\Anaheim power\Phase ...stigation\...rest\fig ...Revised

EXPLANATION

- PROJECT BOUNDARY
- CHAIN LINK FENCE
- DRAIN LINE
- GRAVELLY SAND
- BARE GROUND (UNPAVED)
- 3-STAGE CLARIFIER
- 2-STAGE CLARIFIER
- STAINED SOIL
- HYDRAULIC OIL TANK
- HYDRAULIC PISTON HOIST
- CONCRETE PATCH (ABANDONED WASTE OIL UST)
- GREASE TRAP TANK
- PROPANE TANK
- BURIED CONCRETE CISTERN (APROXIMATE LOCATIONS
- CARDBOARD COMPACTOR
- FLOOR DRAINS
- 1△ SOIL GAS PROBE LOCATION
- HS-1 ● HOLLOW STEM AUGER BORING (SOIL AND GROUNDWATER SAMPLE COLLECTED)



PCE Concentration		
Sample ID	Depth (feet)	µg/L
B-3	5	0.240
B-4	5	0.100
B-5	5	0.190
B-7	5	0.240
B-8	5	0.110
B-9	5	0.190
B-10	5	0.046
B-19	5	0.600

N

SCALE: 1"=100'

Source: AMEC Earth & Environmental, Inc.

URS Corporation

Soil Gas Survey & Hollow Stem Auger Locations
3051, 3065 & 3071 Miraloma Avenue
Anaheim, California

Project No.: 28906973	Date: OCTOBER 2007
Project: City of Anaheim Public Utilities Proposed Power Generation Peaker Site	Figure 2

URS